

Whiting Oil & Gas

Well Name: **Razor #21C-2806B**

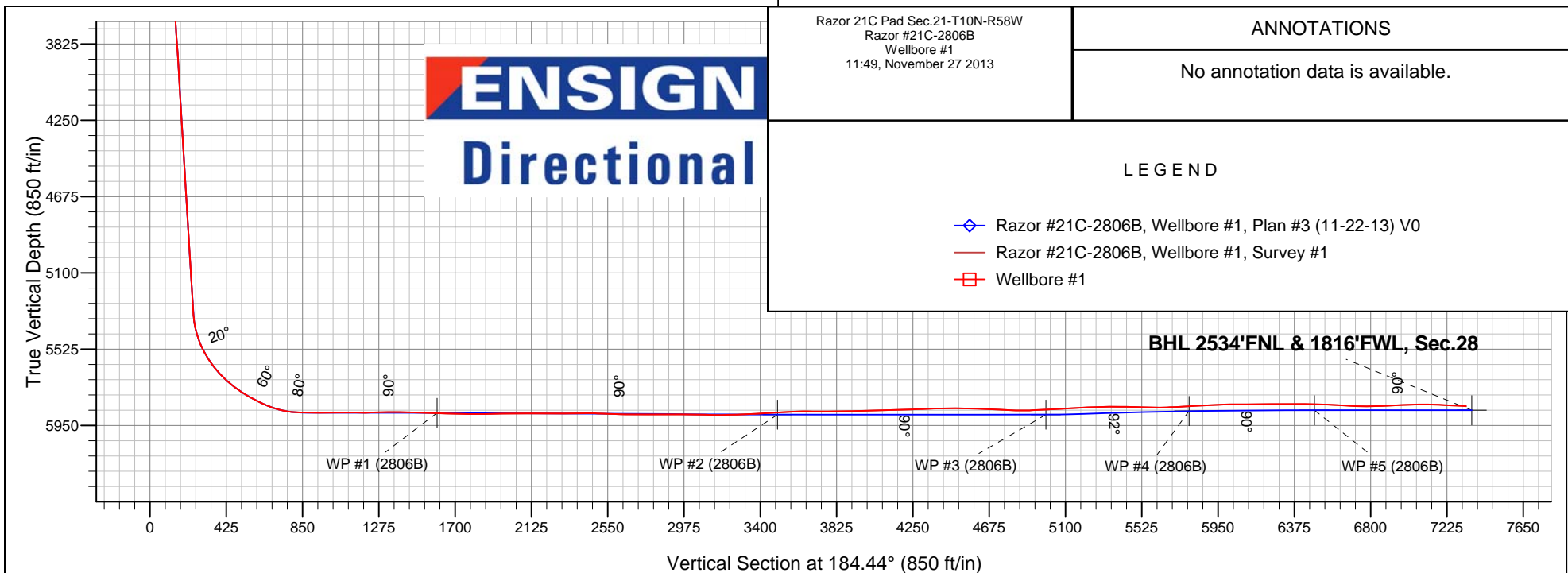
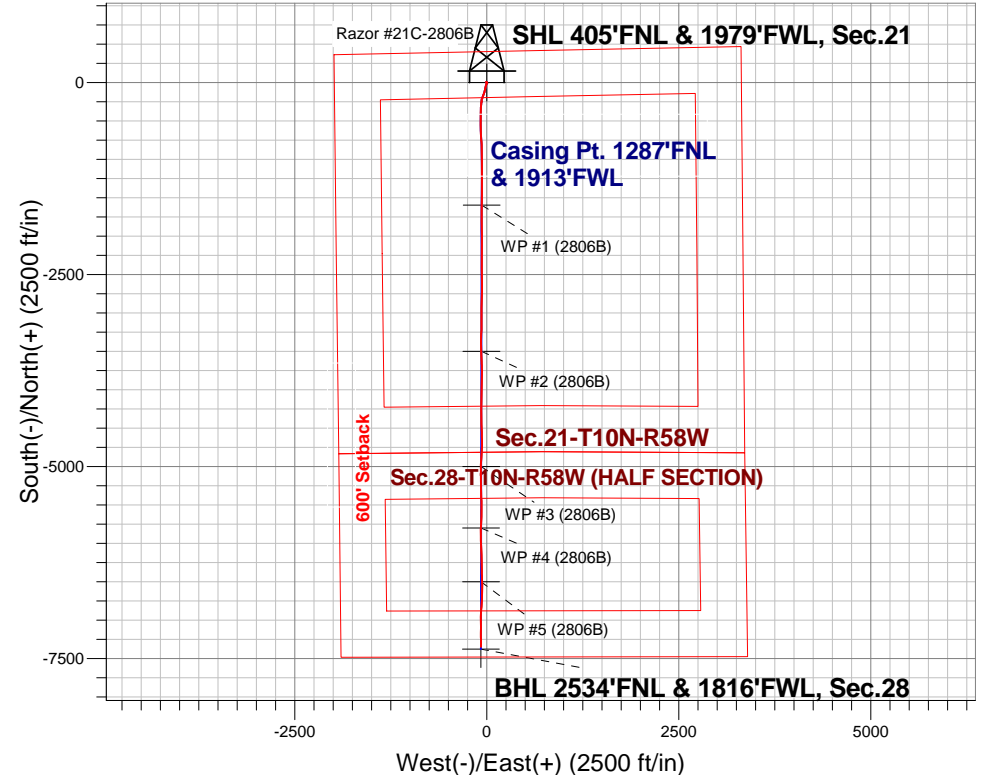
Surface Location: Razor 21C Pad Sec.21-T10N-R58W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
Ground Elevation: 4844.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1549319.83	3450221.22	40.829925	-103.873058	

RKB - 17.3' WELL @ 4861.3ft (RKB - 17.3')

FINAL SURVEY

Projected Bottom Hole Location
12740' MD 5843' TVD 7374' S & 75' W of SHL
87.5 degree Incl @ 179.5 degree AZM





Whiting Oil & Gas

SEC.21-T10N-R58W

Razor 21C Pad Sec.21-T10N-R58W

Razor #21C-2806B

Wellbore #1

Design: Wellbore #1

Standard Survey Report

27 November, 2013

Company:	Whiting Oil & Gas	Local Co-ordinate Reference:	Well Razor #21C-2806B
Project:	SEC.21-T10N-R58W	TVD Reference:	WELL @ 4861.3ft (RKB - 17.3')
Site:	Razor 21C Pad Sec.21-T10N-R58W	MD Reference:	WELL @ 4861.3ft (RKB - 17.3')
Well:	Razor #21C-2806B	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
1,059.0	1.20	119.20	1,058.9	-0.4	-5.4	0.8	0.46	0.42	-10.84
1,154.0	1.30	105.10	1,153.8	-1.1	-3.5	1.4	0.34	0.11	-14.84
1,249.0	1.10	107.90	1,248.8	-1.7	-1.6	1.8	0.22	-0.21	2.95
1,344.0	1.50	116.20	1,343.8	-2.5	0.4	2.5	0.46	0.42	8.74
1,439.0	1.50	135.90	1,438.8	-4.0	2.4	3.8	0.54	0.00	20.74
1,545.0	1.80	168.00	1,544.7	-6.6	3.7	6.3	0.90	0.28	30.28
1,625.0	2.24	174.27	1,624.7	-9.4	4.1	9.0	0.61	0.55	7.84
1,718.0	3.88	216.68	1,717.5	-13.7	2.4	13.5	2.89	1.76	45.60
1,811.0	3.53	215.93	1,810.3	-18.6	-1.1	18.6	0.38	-0.38	-0.81
1,904.0	3.49	209.10	1,903.2	-23.3	-4.2	23.6	0.45	-0.04	-7.34
1,997.0	3.52	204.34	1,996.0	-28.4	-6.7	28.9	0.31	0.03	-5.12
2,090.0	2.81	201.90	2,088.9	-33.1	-8.8	33.7	0.78	-0.76	-2.62
2,183.0	4.45	200.80	2,181.7	-38.6	-10.9	39.4	1.76	1.76	-1.18
2,276.0	3.79	195.17	2,274.4	-45.0	-13.0	45.8	0.83	-0.71	-6.05
2,368.0	3.34	195.24	2,366.2	-50.5	-14.5	51.5	0.49	-0.49	0.08
2,463.0	3.58	195.04	2,461.1	-56.0	-16.0	57.1	0.25	0.25	-0.21
2,559.0	3.41	188.27	2,556.9	-61.7	-17.2	62.9	0.46	-0.18	-7.05
2,654.0	4.67	196.00	2,651.7	-68.3	-18.6	69.5	1.44	1.33	8.14
2,749.0	4.51	189.72	2,746.4	-75.7	-20.3	77.0	0.55	-0.17	-6.61
2,843.0	4.07	186.98	2,840.1	-82.6	-21.4	84.0	0.52	-0.47	-2.91
2,938.0	4.67	182.48	2,934.8	-89.8	-21.9	91.2	0.73	0.63	-4.74
3,033.0	4.54	197.61	3,029.5	-97.3	-23.3	98.8	1.28	-0.14	15.93
3,128.0	4.11	185.11	3,124.2	-104.2	-24.7	105.8	1.09	-0.45	-13.16
3,222.0	4.00	202.95	3,218.0	-110.6	-26.3	112.3	1.34	-0.12	18.98
3,317.0	3.77	199.75	3,312.8	-116.6	-28.6	118.5	0.33	-0.24	-3.37
3,412.0	3.91	197.22	3,407.6	-122.6	-30.6	124.6	0.23	0.15	-2.66
3,506.0	3.54	195.14	3,501.4	-128.5	-32.3	130.6	0.42	-0.39	-2.21
3,601.0	3.11	194.51	3,596.2	-133.8	-33.8	136.0	0.45	-0.45	-0.66
3,696.0	3.14	192.48	3,691.1	-138.9	-35.0	141.2	0.12	0.03	-2.14
3,790.0	4.31	208.14	3,784.9	-144.5	-37.2	146.9	1.64	1.24	16.66
3,885.0	4.10	209.08	3,879.6	-150.6	-40.5	153.3	0.23	-0.22	0.99
3,980.0	3.51	203.22	3,974.4	-156.2	-43.3	159.1	0.74	-0.62	-6.17
4,075.0	3.49	198.94	4,069.2	-161.7	-45.4	164.7	0.28	-0.02	-4.51
4,169.0	3.79	196.87	4,163.0	-167.3	-47.2	170.5	0.35	0.32	-2.20
4,264.0	3.30	193.45	4,257.9	-173.0	-48.8	176.3	0.56	-0.52	-3.60
4,359.0	2.94	194.62	4,352.7	-178.0	-50.0	181.4	0.38	-0.38	1.23
4,454.0	3.96	201.42	4,447.6	-183.4	-51.8	186.9	1.16	1.07	7.16
4,548.0	3.94	200.30	4,541.3	-189.5	-54.1	193.1	0.08	-0.02	-1.19
4,643.0	3.80	200.18	4,636.1	-195.5	-56.4	199.3	0.15	-0.15	-0.13
4,737.0	3.68	199.66	4,729.9	-201.3	-58.5	205.2	0.13	-0.13	-0.55
4,832.0	2.94	203.84	4,824.8	-206.4	-60.5	210.4	0.82	-0.78	4.40
4,927.0	3.71	211.24	4,919.6	-211.2	-63.0	215.5	0.93	0.81	7.79
5,022.0	3.88	191.34	5,014.4	-217.0	-65.3	221.4	1.39	0.18	-20.95
5,117.0	3.62	192.56	5,109.2	-223.1	-66.6	227.6	0.29	-0.27	1.28
5,212.0	3.62	175.73	5,204.0	-229.0	-67.0	233.5	1.11	0.00	-17.72
5,275.0	3.13	176.32	5,266.9	-232.7	-66.7	237.2	0.78	-0.78	0.94
5,307.0	2.97	182.05	5,298.8	-234.4	-66.7	238.8	1.08	-0.50	17.91
5,339.0	4.35	187.64	5,330.8	-236.4	-66.9	240.9	4.45	4.31	17.47
5,371.0	7.63	191.37	5,362.6	-239.7	-67.5	244.2	10.32	10.25	11.66
5,402.0	10.99	191.00	5,393.2	-244.6	-68.4	249.2	10.84	10.84	-1.19
5,434.0	14.56	188.22	5,424.4	-251.6	-69.6	256.2	11.32	11.16	-8.69
5,465.0	17.75	186.21	5,454.2	-260.2	-70.7	264.8	10.45	10.29	-6.48
5,497.0	21.21	184.34	5,484.3	-270.8	-71.6	275.5	10.99	10.81	-5.84
5,528.0	24.91	184.48	5,512.8	-282.9	-72.6	287.7	11.94	11.94	0.45

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Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,560.0	28.35	185.61	5,541.4	-297.2	-73.8	302.0	10.87	10.75	3.53
5,592.0	31.57	185.85	5,569.2	-313.1	-75.4	318.0	10.07	10.06	0.75
5,623.0	34.33	183.90	5,595.2	-329.9	-76.9	334.8	9.54	8.90	-6.29
5,655.0	37.74	182.26	5,621.0	-348.7	-77.9	353.6	11.07	10.66	-5.13
5,686.0	41.40	181.36	5,644.9	-368.4	-78.5	373.4	11.95	11.81	-2.90
5,718.0	43.38	181.27	5,668.6	-390.0	-79.0	394.9	6.19	6.19	-0.28
5,750.0	45.85	180.93	5,691.4	-412.4	-79.4	417.3	7.75	7.72	-1.06
5,782.0	49.39	180.51	5,712.9	-436.1	-79.7	440.9	11.10	11.06	-1.31
5,814.0	52.99	180.59	5,733.0	-461.0	-79.9	465.8	11.25	11.25	0.25
5,845.0	55.81	180.35	5,751.0	-486.2	-80.1	490.9	9.12	9.10	-0.77
5,877.0	57.59	179.94	5,768.6	-512.9	-80.2	517.6	5.66	5.56	-1.28
5,909.0	59.67	179.78	5,785.2	-540.3	-80.1	544.8	6.51	6.50	-0.50
5,940.0	61.70	179.36	5,800.4	-567.3	-79.9	571.8	6.65	6.55	-1.35
5,972.0	63.24	179.40	5,815.2	-595.7	-79.6	600.0	4.81	4.81	0.13
6,004.0	65.67	178.43	5,829.0	-624.5	-79.1	628.8	8.07	7.59	-3.03
6,035.0	67.98	176.87	5,841.2	-653.0	-77.9	657.1	8.77	7.45	-5.03
6,067.0	71.54	175.77	5,852.3	-683.0	-76.0	686.8	11.58	11.13	-3.44
6,099.0	74.81	175.61	5,861.5	-713.5	-73.7	717.1	10.23	10.22	-0.50
6,130.0	78.42	176.12	5,868.7	-743.6	-71.5	746.9	11.75	11.65	1.65
6,162.0	82.87	176.89	5,873.9	-775.1	-69.6	778.1	14.11	13.91	2.41
6,194.0	86.44	177.85	5,876.9	-806.9	-68.1	809.8	11.55	11.16	3.00
6,216.0	88.48	178.53	5,877.9	-828.9	-67.4	831.6	9.77	9.27	3.09
6,269.0	89.50	178.69	5,878.8	-881.8	-66.1	884.3	1.95	1.92	0.30
6,301.0	89.90	178.87	5,879.0	-913.8	-65.5	916.2	1.37	1.25	0.56
6,333.0	90.40	179.06	5,878.9	-945.8	-64.9	948.0	1.67	1.56	0.59
6,364.0	91.20	179.17	5,878.5	-976.8	-64.4	978.9	2.60	2.58	0.35
6,396.0	89.80	179.39	5,878.2	-1,008.8	-64.0	1,010.7	4.43	-4.38	0.69
6,427.0	90.10	179.13	5,878.2	-1,039.8	-63.6	1,041.6	1.28	0.97	-0.84
6,459.0	89.20	179.62	5,878.4	-1,071.8	-63.2	1,073.5	3.20	-2.81	1.53
6,491.0	89.60	179.50	5,878.7	-1,103.8	-63.0	1,105.4	1.31	1.25	-0.38
6,522.0	89.70	180.87	5,878.9	-1,134.8	-63.1	1,136.3	4.43	0.32	4.42
6,554.0	90.20	180.90	5,878.9	-1,166.8	-63.6	1,168.2	1.57	1.56	0.09
6,585.0	91.00	180.93	5,878.6	-1,197.8	-64.1	1,199.2	2.58	2.58	0.10
6,617.0	91.60	180.85	5,877.9	-1,229.8	-64.6	1,231.1	1.89	1.88	-0.25
6,648.0	91.20	180.11	5,877.1	-1,260.8	-64.8	1,262.0	2.71	-1.29	-2.39
6,680.0	91.30	180.01	5,876.4	-1,292.8	-64.9	1,293.9	0.44	0.31	-0.31
6,712.0	90.60	180.21	5,875.9	-1,324.8	-64.9	1,325.8	2.28	-2.19	0.63
6,743.0	90.80	180.62	5,875.5	-1,355.8	-65.2	1,356.7	1.47	0.65	1.32
6,775.0	89.10	179.23	5,875.6	-1,387.8	-65.1	1,388.6	6.86	-5.31	-4.34
6,807.0	88.60	178.21	5,876.2	-1,419.7	-64.4	1,420.5	3.55	-1.56	-3.19
6,838.0	87.90	179.00	5,877.1	-1,450.7	-63.7	1,451.3	3.40	-2.26	2.55
6,870.0	88.30	178.86	5,878.2	-1,482.7	-63.1	1,483.1	1.32	1.25	-0.44
6,901.0	88.30	179.89	5,879.1	-1,513.7	-62.7	1,514.0	3.32	0.00	3.32
6,933.0	87.90	181.33	5,880.2	-1,545.7	-63.1	1,545.9	4.67	-1.25	4.50
6,965.0	88.00	181.47	5,881.3	-1,577.6	-63.8	1,577.8	0.54	0.31	0.44
6,985.6	88.13	181.49	5,882.0	-1,598.2	-64.4	1,598.4	0.65	0.65	0.10
WP #1 (2806B)									
6,996.0	88.20	181.50	5,882.4	-1,608.6	-64.6	1,608.8	0.65	0.65	0.10
7,028.0	88.20	181.44	5,883.4	-1,640.6	-65.5	1,640.7	0.19	0.00	-0.19
7,060.0	88.70	180.95	5,884.2	-1,672.6	-66.1	1,672.7	2.19	1.56	-1.53
7,091.0	89.00	180.94	5,884.9	-1,703.5	-66.6	1,703.6	0.97	0.97	-0.03
7,123.0	89.10	181.04	5,885.4	-1,735.5	-67.2	1,735.5	0.44	0.31	0.31
7,155.0	89.10	180.71	5,885.9	-1,767.5	-67.7	1,767.5	1.03	0.00	-1.03
7,186.0	89.50	180.01	5,886.3	-1,798.5	-67.9	1,798.4	2.60	1.29	-2.26

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Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
7,218.0	89.60	179.77	5,886.5	-1,830.5	-67.8	1,830.3	0.81	0.31	-0.75	
7,250.0	90.60	179.24	5,886.5	-1,862.5	-67.5	1,862.2	3.54	3.13	-1.66	
7,281.0	91.00	179.05	5,886.0	-1,893.5	-67.1	1,893.0	1.43	1.29	-0.61	
7,313.0	90.90	178.47	5,885.5	-1,925.5	-66.4	1,924.9	1.84	-0.31	-1.81	
7,344.0	91.30	178.30	5,884.9	-1,956.5	-65.5	1,955.7	1.40	1.29	-0.55	
7,375.0	91.70	178.28	5,884.1	-1,987.5	-64.6	1,986.5	1.29	1.29	-0.06	
7,407.0	91.60	178.54	5,883.2	-2,019.4	-63.7	2,018.3	0.87	-0.31	0.81	
7,439.0	90.50	178.50	5,882.6	-2,051.4	-62.9	2,050.1	3.44	-3.44	-0.13	
7,470.0	89.70	179.25	5,882.5	-2,082.4	-62.3	2,081.0	3.54	-2.58	2.42	
7,502.0	89.30	180.88	5,882.8	-2,114.4	-62.3	2,112.9	5.24	-1.25	5.09	
7,534.0	89.50	181.18	5,883.1	-2,146.4	-62.9	2,144.8	1.13	0.63	0.94	
7,565.0	89.50	181.27	5,883.4	-2,177.4	-63.5	2,175.8	0.29	0.00	0.29	
7,597.0	89.80	181.90	5,883.6	-2,209.4	-64.4	2,207.7	2.18	0.94	1.97	
7,629.0	89.90	181.23	5,883.7	-2,241.4	-65.3	2,239.7	2.12	0.31	-2.09	
7,660.0	90.50	181.59	5,883.6	-2,272.4	-66.1	2,270.7	2.26	1.94	1.16	
7,692.0	90.90	181.43	5,883.2	-2,304.3	-66.9	2,302.6	1.35	1.25	-0.50	
7,724.0	90.50	180.24	5,882.8	-2,336.3	-67.4	2,334.5	3.92	-1.25	-3.72	
7,755.0	89.80	178.20	5,882.7	-2,367.3	-66.9	2,365.4	6.96	-2.26	-6.58	
7,787.0	90.10	178.18	5,882.8	-2,399.3	-65.9	2,397.2	0.94	0.94	-0.06	
7,818.0	90.70	177.89	5,882.5	-2,430.3	-64.9	2,428.0	2.15	1.94	-0.94	
7,850.0	89.50	177.62	5,882.5	-2,462.3	-63.6	2,459.8	3.84	-3.75	-0.84	
7,882.0	88.30	178.40	5,883.1	-2,494.2	-62.5	2,491.6	4.47	-3.75	2.44	
7,914.0	87.70	179.49	5,884.2	-2,526.2	-61.9	2,523.4	3.89	-1.88	3.41	
7,945.0	87.70	179.48	5,885.5	-2,557.2	-61.6	2,554.3	0.03	0.00	-0.03	
7,977.0	87.80	180.65	5,886.7	-2,589.2	-61.7	2,586.2	3.67	0.31	3.66	
8,009.0	88.70	180.83	5,887.7	-2,621.2	-62.1	2,618.1	2.87	2.81	0.56	
8,041.0	89.10	180.96	5,888.3	-2,653.1	-62.6	2,650.0	1.31	1.25	0.41	
8,072.0	89.30	180.73	5,888.7	-2,684.1	-63.0	2,681.0	0.98	0.65	-0.74	
8,103.0	89.70	181.06	5,889.0	-2,715.1	-63.5	2,711.9	1.67	1.29	1.06	
8,135.0	89.90	180.94	5,889.1	-2,747.1	-64.1	2,743.9	0.73	0.63	-0.38	
8,166.0	90.20	181.78	5,889.1	-2,778.1	-64.8	2,774.8	2.88	0.97	2.71	
8,198.0	90.60	182.15	5,888.9	-2,810.1	-65.9	2,806.8	1.70	1.25	1.16	
8,229.0	90.60	181.66	5,888.5	-2,841.1	-67.0	2,837.7	1.58	0.00	-1.58	
8,261.0	90.70	181.23	5,888.2	-2,873.1	-67.8	2,869.7	1.38	0.31	-1.34	
8,292.0	90.80	181.12	5,887.8	-2,904.1	-68.4	2,900.6	0.48	0.32	-0.35	
8,324.0	89.40	180.96	5,887.7	-2,936.1	-69.0	2,932.6	4.40	-4.38	-0.50	
8,355.0	88.40	180.67	5,888.3	-2,967.0	-69.4	2,963.5	3.36	-3.23	-0.94	
8,387.0	88.60	180.48	5,889.2	-2,999.0	-69.7	2,995.4	0.86	0.63	-0.59	
8,419.0	88.80	180.49	5,889.9	-3,031.0	-70.0	3,027.4	0.63	0.63	0.03	
8,450.0	89.10	180.23	5,890.4	-3,062.0	-70.2	3,058.3	1.28	0.97	-0.84	
8,482.0	89.40	180.35	5,890.9	-3,094.0	-70.4	3,090.2	1.01	0.94	0.38	
8,513.0	89.40	179.86	5,891.2	-3,125.0	-70.4	3,121.1	1.58	0.00	-1.58	
8,545.0	90.00	180.03	5,891.4	-3,157.0	-70.4	3,153.0	1.95	1.88	0.53	
8,577.0	90.10	180.51	5,891.3	-3,189.0	-70.5	3,184.9	1.53	0.31	1.50	
8,608.0	90.20	180.73	5,891.2	-3,220.0	-70.9	3,215.8	0.78	0.32	0.71	
8,640.0	91.10	181.61	5,890.9	-3,252.0	-71.5	3,247.8	3.93	2.81	2.75	
8,671.0	91.90	182.27	5,890.1	-3,283.0	-72.6	3,278.7	3.35	2.58	2.13	
8,703.0	92.70	181.60	5,888.8	-3,314.9	-73.7	3,310.7	3.26	2.50	-2.09	
8,735.0	93.80	181.20	5,887.0	-3,346.9	-74.4	3,342.6	3.66	3.44	-1.25	
8,766.0	94.10	180.95	5,884.8	-3,377.8	-75.0	3,373.5	1.26	0.97	-0.81	
8,797.0	93.70	179.42	5,882.7	-3,408.7	-75.1	3,404.3	5.09	-1.29	-4.94	
8,829.0	92.50	178.60	5,881.0	-3,440.7	-74.6	3,436.1	4.54	-3.75	-2.56	
8,861.0	92.40	178.22	5,879.6	-3,472.6	-73.7	3,467.9	1.23	-0.31	-1.19	
8,888.2	92.84	177.82	5,878.4	-3,499.7	-72.7	3,494.9	2.19	1.61	-1.48	

Company:	Whiting Oil & Gas	Local Co-ordinate Reference:	Well Razor #21C-2806B
Project:	SEC.21-T10N-R58W	TVD Reference:	WELL @ 4861.3ft (RKB - 17.3')
Site:	Razor 21C Pad Sec.21-T10N-R58W	MD Reference:	WELL @ 4861.3ft (RKB - 17.3')
Well:	Razor #21C-2806B	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
WP #2 (2806B)									
8,892.0	92.90	177.76	5,878.2	-3,503.6	-72.6	3,498.7	2.19	1.61	-1.48
8,924.0	93.30	177.83	5,876.5	-3,535.5	-71.4	3,530.4	1.27	1.25	0.22
8,956.0	93.70	177.95	5,874.5	-3,567.4	-70.2	3,562.1	1.30	1.25	0.38
8,987.0	92.70	178.55	5,872.8	-3,598.3	-69.2	3,592.9	3.76	-3.23	1.94
9,019.0	90.70	178.10	5,871.8	-3,630.3	-68.3	3,624.7	6.41	-6.25	-1.41
9,055.0	89.70	176.27	5,871.7	-3,666.3	-66.5	3,660.4	5.79	-2.78	-5.08
9,085.0	89.00	177.32	5,872.0	-3,696.2	-64.9	3,690.2	4.21	-2.33	3.50
9,116.0	90.20	178.33	5,872.3	-3,727.2	-63.7	3,721.0	5.06	3.87	3.26
9,147.0	91.00	178.97	5,871.9	-3,758.2	-63.0	3,751.8	3.30	2.58	2.06
9,177.0	90.80	181.05	5,871.5	-3,788.2	-63.0	3,781.7	6.96	-0.67	6.93
9,208.0	90.70	180.71	5,871.1	-3,819.2	-63.4	3,812.6	1.14	-0.32	-1.10
9,239.0	90.00	179.32	5,870.9	-3,850.2	-63.5	3,843.5	5.02	-2.26	-4.48
9,270.0	90.00	180.44	5,870.9	-3,881.2	-63.4	3,874.4	3.61	0.00	3.61
9,301.0	90.50	182.34	5,870.7	-3,912.2	-64.1	3,905.4	6.34	1.61	6.13
9,332.0	91.30	182.98	5,870.3	-3,943.1	-65.6	3,936.4	3.30	2.58	2.06
9,362.0	92.00	182.83	5,869.4	-3,973.1	-67.1	3,966.4	2.39	2.33	-0.50
9,393.0	92.10	182.20	5,868.3	-4,004.0	-68.5	3,997.3	2.06	0.32	-2.03
9,423.0	92.40	182.01	5,867.1	-4,034.0	-69.6	4,027.3	1.18	1.00	-0.63
9,454.0	92.80	181.56	5,865.7	-4,064.9	-70.5	4,058.2	1.94	1.29	-1.45
9,485.0	91.20	180.63	5,864.6	-4,095.9	-71.1	4,089.1	5.97	-5.16	-3.00
9,516.0	90.40	181.29	5,864.2	-4,126.9	-71.6	4,120.1	3.35	-2.58	2.13
9,547.0	90.70	179.49	5,863.9	-4,157.9	-71.8	4,151.0	5.89	0.97	-5.81
9,577.0	91.60	179.76	5,863.3	-4,187.9	-71.6	4,180.9	3.13	3.00	0.90
9,608.0	92.00	179.90	5,862.3	-4,218.9	-71.6	4,211.8	1.37	1.29	0.45
9,639.0	92.30	179.99	5,861.1	-4,249.9	-71.5	4,242.6	1.01	0.97	0.29
9,670.0	92.60	179.82	5,859.8	-4,280.8	-71.5	4,273.5	1.11	0.97	-0.55
9,700.0	92.60	179.58	5,858.5	-4,310.8	-71.3	4,303.4	0.80	0.00	-0.80
9,731.0	92.00	178.63	5,857.2	-4,341.8	-70.8	4,334.2	3.62	-1.94	-3.06
9,761.0	92.10	178.04	5,856.1	-4,371.7	-70.0	4,364.0	1.99	0.33	-1.97
9,792.0	91.40	178.72	5,855.2	-4,402.7	-69.1	4,394.9	3.15	-2.26	2.19
9,822.0	89.60	178.84	5,854.9	-4,432.7	-68.4	4,424.7	6.01	-6.00	0.40
9,853.0	89.50	178.56	5,855.2	-4,463.7	-67.7	4,455.5	0.96	-0.32	-0.90
9,884.0	90.00	178.41	5,855.3	-4,494.7	-66.9	4,486.4	1.68	1.61	-0.48
9,914.0	90.70	178.19	5,855.1	-4,524.7	-66.0	4,516.2	2.45	2.33	-0.73
9,945.0	89.90	178.92	5,855.0	-4,555.7	-65.3	4,547.0	3.49	-2.58	2.35
9,976.0	88.20	178.60	5,855.5	-4,586.6	-64.6	4,577.9	5.58	-5.48	-1.03
10,006.0	88.10	178.32	5,856.4	-4,616.6	-63.8	4,607.7	0.99	-0.33	-0.93
10,037.0	87.10	178.83	5,857.7	-4,647.6	-63.0	4,638.5	3.62	-3.23	1.65
10,068.0	86.60	179.20	5,859.4	-4,678.5	-62.5	4,669.3	2.01	-1.61	1.19
10,099.0	86.60	180.15	5,861.3	-4,709.5	-62.3	4,700.2	3.06	0.00	3.06
10,130.0	86.80	181.36	5,863.1	-4,740.4	-62.7	4,731.1	3.95	0.65	3.90
10,161.0	87.60	182.44	5,864.6	-4,771.4	-63.7	4,762.0	4.33	2.58	3.48
10,192.0	88.50	182.89	5,865.6	-4,802.3	-65.2	4,793.0	3.25	2.90	1.45
10,222.0	89.30	183.43	5,866.2	-4,832.3	-66.8	4,822.9	3.22	2.67	1.80
10,253.0	89.90	184.46	5,866.4	-4,863.2	-69.0	4,853.9	3.85	1.94	3.32
10,284.0	91.00	184.25	5,866.2	-4,894.1	-71.3	4,884.9	3.61	3.55	-0.68
10,314.0	92.60	183.87	5,865.2	-4,924.0	-73.4	4,914.9	5.48	5.33	-1.27
10,345.0	93.10	183.57	5,863.7	-4,954.9	-75.4	4,945.9	1.88	1.61	-0.97
10,376.0	93.00	182.27	5,862.1	-4,985.8	-77.0	4,976.8	4.20	-0.32	-4.19
10,388.3	92.80	181.66	5,861.4	-4,998.1	-77.4	4,989.1	5.20	-1.66	-4.93
WP #3 (2806B)									
10,406.0	92.50	180.79	5,860.6	-5,015.8	-77.8	5,006.7	5.20	-1.67	-4.93
10,437.0	92.70	180.12	5,859.2	-5,046.7	-78.1	5,037.6	2.25	0.65	-2.16

Company:	Whiting Oil & Gas	Local Co-ordinate Reference:	Well Razor #21C-2806B
Project:	SEC.21-T10N-R58W	TVD Reference:	WELL @ 4861.3ft (RKB - 17.3')
Site:	Razor 21C Pad Sec.21-T10N-R58W	MD Reference:	WELL @ 4861.3ft (RKB - 17.3')
Well:	Razor #21C-2806B	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
10,468.0	93.00	180.15	5,857.7	-5,077.7	-78.1	5,068.5	0.97	0.97	0.10
10,499.0	93.30	179.79	5,856.0	-5,108.6	-78.1	5,099.4	1.51	0.97	-1.16
10,530.0	92.80	179.20	5,854.3	-5,139.6	-77.9	5,130.2	2.49	-1.61	-1.90
10,560.0	93.20	178.97	5,852.7	-5,169.6	-77.4	5,160.0	1.54	1.33	-0.77
10,591.0	93.60	178.58	5,850.9	-5,200.5	-76.7	5,190.8	1.80	1.29	-1.26
10,622.0	92.80	177.94	5,849.2	-5,231.4	-75.8	5,221.6	3.30	-2.58	-2.06
10,653.0	92.40	177.47	5,847.8	-5,262.4	-74.5	5,252.4	1.99	-1.29	-1.52
10,683.0	91.80	177.57	5,846.7	-5,292.3	-73.2	5,282.1	2.03	-2.00	0.33
10,714.0	90.20	178.53	5,846.1	-5,323.3	-72.2	5,312.9	6.02	-5.16	3.10
10,745.0	91.20	179.68	5,845.8	-5,354.3	-71.7	5,343.8	4.92	3.23	3.71
10,776.0	90.40	179.67	5,845.3	-5,385.3	-71.5	5,374.7	2.58	-2.58	-0.03
10,807.0	89.00	179.23	5,845.5	-5,416.3	-71.2	5,405.6	4.73	-4.52	-1.42
10,838.0	88.60	179.42	5,846.1	-5,447.3	-70.9	5,436.4	1.43	-1.29	0.61
10,868.0	88.40	178.96	5,846.9	-5,477.3	-70.4	5,466.3	1.67	-0.67	-1.53
10,898.0	88.50	178.85	5,847.7	-5,507.2	-69.9	5,496.1	0.50	0.33	-0.37
10,929.0	88.70	178.87	5,848.5	-5,538.2	-69.2	5,527.0	0.65	0.65	0.06
10,960.0	88.90	179.53	5,849.1	-5,569.2	-68.8	5,557.9	2.22	0.65	2.13
10,992.0	89.10	180.71	5,849.7	-5,601.2	-68.9	5,589.8	3.74	0.63	3.69
11,022.0	89.80	181.36	5,850.0	-5,631.2	-69.4	5,619.7	3.18	2.33	2.17
11,053.0	91.10	182.14	5,849.7	-5,662.2	-70.4	5,650.7	4.89	4.19	2.52
11,084.0	92.80	182.94	5,848.7	-5,693.1	-71.7	5,681.6	6.06	5.48	2.58
11,115.0	92.70	182.79	5,847.2	-5,724.1	-73.3	5,712.6	0.58	-0.32	-0.48
11,146.0	93.40	182.77	5,845.5	-5,755.0	-74.8	5,743.5	2.26	2.26	-0.06
11,177.0	93.70	182.61	5,843.6	-5,785.9	-76.2	5,774.5	1.10	0.97	-0.52
11,188.9	93.50	182.21	5,842.9	-5,797.8	-76.7	5,786.3	3.78	-1.67	-3.40
WP #4 (2806B)									
11,207.0	93.20	181.59	5,841.8	-5,815.8	-77.3	5,804.4	3.78	-1.67	-3.40
11,238.0	92.40	180.36	5,840.3	-5,846.8	-77.9	5,835.3	4.73	-2.58	-3.97
11,269.0	92.60	179.69	5,839.0	-5,877.8	-77.9	5,866.2	2.25	0.65	-2.16
11,299.0	93.10	179.40	5,837.5	-5,907.7	-77.6	5,896.0	1.93	1.67	-0.97
11,329.0	92.80	178.49	5,835.9	-5,937.7	-77.1	5,925.8	3.19	-1.00	-3.03
11,360.0	92.50	178.62	5,834.5	-5,968.6	-76.3	5,956.6	1.05	-0.97	0.42
11,390.0	91.90	178.26	5,833.3	-5,998.6	-75.5	5,986.4	2.33	-2.00	-1.20
11,420.0	91.00	178.05	5,832.6	-6,028.6	-74.5	6,016.3	3.08	-3.00	-0.70
11,451.0	90.60	176.36	5,832.1	-6,059.5	-73.0	6,047.0	5.60	-1.29	-5.45
11,482.0	89.90	177.27	5,832.0	-6,090.5	-71.3	6,077.7	3.70	-2.26	2.94
11,513.0	89.20	178.40	5,832.3	-6,121.5	-70.1	6,108.5	4.29	-2.26	3.65
11,544.0	89.80	179.02	5,832.5	-6,152.4	-69.4	6,139.4	2.78	1.94	2.00
11,575.0	90.60	178.68	5,832.4	-6,183.4	-68.8	6,170.2	2.80	2.58	-1.10
11,605.0	91.20	178.64	5,831.9	-6,213.4	-68.1	6,200.1	2.00	2.00	-0.13
11,636.0	91.00	178.68	5,831.3	-6,244.4	-67.4	6,230.9	0.66	-0.65	0.13
11,667.0	90.40	178.72	5,831.0	-6,275.4	-66.7	6,261.7	1.94	-1.94	0.13
11,698.0	90.60	178.70	5,830.7	-6,306.4	-66.0	6,292.6	0.65	0.65	-0.06
11,729.0	90.60	178.82	5,830.4	-6,337.4	-65.3	6,323.4	0.39	0.00	0.39
11,759.0	89.70	178.74	5,830.3	-6,367.4	-64.7	6,353.3	3.01	-3.00	-0.27
11,789.0	89.50	178.24	5,830.5	-6,397.4	-63.9	6,383.1	1.80	-0.67	-1.67
11,820.0	89.70	177.87	5,830.7	-6,428.3	-62.8	6,413.9	1.36	0.65	-1.19
11,851.0	89.80	178.41	5,830.9	-6,459.3	-61.8	6,444.7	1.77	0.32	1.74
11,882.0	88.30	178.60	5,831.4	-6,490.3	-61.0	6,475.6	4.88	-4.84	0.61
11,892.0	88.30	178.73	5,831.7	-6,500.3	-60.8	6,485.5	1.33	0.00	1.33
WP #5 (2806B)									
11,912.0	88.30	179.00	5,832.3	-6,520.3	-60.4	6,505.4	1.33	0.00	1.33
11,942.0	87.30	179.60	5,833.4	-6,550.3	-60.0	6,535.3	3.89	-3.33	2.00
11,973.0	87.40	179.47	5,834.8	-6,581.2	-59.8	6,566.1	0.53	0.32	-0.42

Company:	Whiting Oil & Gas	Local Co-ordinate Reference:	Well Razor #21C-2806B
Project:	SEC.21-T10N-R58W	TVD Reference:	WELL @ 4861.3ft (RKB - 17.3')
Site:	Razor 21C Pad Sec.21-T10N-R58W	MD Reference:	WELL @ 4861.3ft (RKB - 17.3')
Well:	Razor #21C-2806B	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
12,004.0	88.10	180.07	5,836.1	-6,612.2	-59.6	6,597.0	2.97	2.26	1.94
12,035.0	87.30	181.11	5,837.3	-6,643.2	-60.0	6,627.9	4.23	-2.58	3.35
12,066.0	86.50	182.21	5,839.0	-6,674.1	-60.9	6,658.8	4.38	-2.58	3.55
12,097.0	87.10	182.92	5,840.7	-6,705.0	-62.2	6,689.8	3.00	1.94	2.29
12,128.0	87.70	183.53	5,842.1	-6,736.0	-64.0	6,720.7	2.76	1.94	1.97
12,158.0	89.10	184.22	5,843.0	-6,765.9	-66.0	6,750.7	5.20	4.67	2.30
12,189.0	90.40	184.49	5,843.1	-6,796.8	-68.4	6,781.7	4.28	4.19	0.87
12,220.0	90.70	183.72	5,842.8	-6,827.7	-70.6	6,812.7	2.67	0.97	-2.48
12,250.0	91.30	183.93	5,842.3	-6,857.6	-72.6	6,842.7	2.12	2.00	0.70
12,281.0	91.90	183.94	5,841.4	-6,888.6	-74.7	6,873.7	1.94	1.94	0.03
12,311.0	92.60	182.57	5,840.2	-6,918.5	-76.4	6,903.6	5.13	2.33	-4.57
12,342.0	93.30	181.39	5,838.6	-6,949.4	-77.5	6,934.6	4.42	2.26	-3.81
12,373.0	93.60	180.12	5,836.8	-6,980.4	-77.9	6,965.5	4.20	0.97	-4.10
12,404.0	93.10	178.88	5,835.0	-7,011.3	-77.6	6,996.3	4.31	-1.61	-4.00
12,435.0	92.20	178.23	5,833.5	-7,042.3	-76.8	7,027.1	3.58	-2.90	-2.10
12,466.0	90.70	179.26	5,832.7	-7,073.2	-76.2	7,057.9	5.87	-4.84	3.32
12,497.0	89.80	180.47	5,832.6	-7,104.2	-76.1	7,088.8	4.86	-2.90	3.90
12,527.0	89.10	180.42	5,832.9	-7,134.2	-76.3	7,118.8	2.34	-2.33	-0.17
12,558.0	87.70	179.74	5,833.8	-7,165.2	-76.4	7,149.7	5.02	-4.52	-2.19
12,588.0	87.10	180.01	5,835.1	-7,195.2	-76.3	7,179.5	2.19	-2.00	0.90
12,619.0	87.10	179.68	5,836.7	-7,226.2	-76.2	7,210.4	1.06	0.00	-1.06
12,650.0	87.10	179.24	5,838.3	-7,257.1	-75.9	7,241.2	1.42	0.00	-1.42
12,690.0	87.20	179.09	5,840.2	-7,297.1	-75.3	7,281.0	0.45	0.25	-0.38
12,740.0	87.50	179.50	5,842.6	-7,347.0	-74.7	7,330.8	1.02	0.60	0.82
BHL 2566'FNL & 1815'FWL, Sec.28									

Checked By: _____ Approved By: _____ Date: _____